

Remarks

Summary

The specification has been amended to address minor informalities indicated on page 2 of the Office Action. Claim 1 was amended to correct a previously unnoticed minor informality. Claims 1 and 3-18 remain pending in the application.

Claim Rejections - 35 U.S.C. § 102

In the Office Action of January 10, 2005, claims 1, 3-7, 10-13, and 15-18 were again rejected under 35 U.S.C. § 102, as being anticipated by Jain (U.S. Patent No. 5,602,423). Ignoring the clear distinctions made in the former Response filed October 28, 2004, the examiner made this rejection final. Applicant again traverses the rejection for at least the following reasons.

The examiner appears to have reached some odd conclusion that only the recitation of some specific numerical value, as it relates to the distance between the slit dummies, is sufficient to distinguish the claimed invention from the device shown in Jain. Such a conclusion is at odds with established Office practice and every legal precedent.

Hence, in the mind of the examiner, independent claims 1 and 11 are deemed anticipated, while dependent claims 8, 9, 14 (which contain specific numerical values) are deemed allowable. In light of this startling evolution in the doctrine of anticipation, applicant poses the following question in preparation for his Appeal Brief.

How does Jain, which contains admittedly makes “no mention . . . directed to the distances between the insulating pillars” (See, admission at page 4, paragraph 5 of the subject Office Action), anticipate a claimed relationship wherein a “distance L between the slit dummies is less than the maximum width Wmax,” but not also anticipate a claimed relationship wherein “a distance between the slit dummies is approximately $\frac{\sqrt{3}}{2}$ of the maximum width Wmax”?

This is exactly the position the examiner has taken, and it is logically impaired and legally erroneous. Either the unspoken, undefined, and unspecified distance relationship between slit dummies suggested by Jain anticipates ALL relationships wherein L is less than a maximum width Wmax, or it anticipates none of them. The mere recitation of a numerical value further defining exactly “how much less” is irrelevant to a consideration of Jain as a piece of anticipating prior art.

The examiner did not posit an obviousness argument under 35 U.S.C. § 103. The examiner did not posit an indefinite argument under 35 U.S. C. § 112. The only rejection is one that states Jain anticipates claims 1-7, 10-13, and 15-18, but doesn’t anticipate claims 8, 9, and 14. Thus, legally Jain must - in and of itself - disclose each and every limitation recited in the rejected claims. Jain does not disclose the claimed relationship between distance L and maximum width Wmax. Jain also does not disclose the recited relationship between thickness H and width W.

Instead of addressing these fatal disclosure flaws in her anticipation rejection, the examiner launches off into a series of arguments that sound like indefiniteness (?), but are somehow deemed supportive of her anticipation rejection.

For example, the examiner states that “applicant has not clearly set forth the thickness of the wiring nor the width of the wiring” (See, Office Action at page 3, paragraph 3, response A). Here again, the examiner would apparently be comforted by the recitation of some range of numerical values. But applicant has clearly defined his claim terms in his own manner as the law allows.

Every wiring structure and conductive pattern structure applicable to the subject invention has a thickness and a width defined within a concrete range of permissible values, as defined by a clearly expressed mathematical relationship. Since width and thickness are by their nature positive, continuous quantities, particular thicknesses and widths for various embodiments of the subject invention are defined over the field of positive real numbers where H is greater than 0nm and W is greater than $1\mu\text{m}$ in accordance with the equation $W_{\text{max}} = \text{Exp}(H/735)$. In other words, multiple embodiments of the invention exist for which the stated mathematical relationship holds. Furthermore, those of ordinary skill will understand that a particular thickness or width for a wiring structure can be determined at the time of manufacture and that related parameters can be derived therefrom or vice versa. Therefore, since the thickness and width for the wiring structure and a conductive pattern structure are clearly established in claims 1 and 11, the examiner’s argument is not only irrelevant to her stated anticipation rejection over Jain, but also utterly erroneous.

If the examiner truly finds the disclosure, definition and/or descriptive relationship(s) between thickness H , width W , and/or distance L inadequate, then let her withdraw the current Office Action and particularly reject the pending claims under 35 U.S. C. § 112.

The Office Action next states that “since H is a variable and applicant has not clearly stated such thickness of the wiring thus the W_{max} is unknown

and therefore the width cannot be determined” (See, Office Action at page 3, paragraph 3, response B).

Again, were this true, the rejection would sound in indefiniteness, not anticipation. As noted above, the invention covers a range of thicknesses across the field of positive real numbers. Hence, for any thickness H , the range of valid widths is readily determined based on the maximum width W_{max} calculated from the equation $W_{max} = \text{Exp}(H/735)$. It is not necessary for the width to be uniquely determined for each given thickness H because embodiments of the invention are allowed to have any width W so long as it is larger than W_{max} .

Returning for just a moment to the reference at issue, the examiner tosses in, “Fig. 7 [in Jain shows] that a narrower conductor (26) does not require any slit dummies, whereas wider conductor 52 requires a plurality of insulating pillars.” (By the way, element 26 is a channel, not a narrower conductor, and the width of a channel in Jain does not define the width of a conductor. See, conductor 28 verses channel 26 description). Even if the implied conclusion of this statement were true, it is utterly irrelevant to the deficiencies in the anticipation rejection. Does the presence of insulating pillars in relation to some of the conductors shown the Jain suggest the recited relationships between thickness H , width W and distance L in the subject invention? Clearly not.

The examiner next states “the distance L is depended upon W_{max} which is depended upon H , [and] since H is not claimed, thus L is unknown”. Well, this statement starts off strong. Yes, the distance L is clearly related to maximum width W_{max} which in turn is clearly defined in relation to thickness H ! (Now, the question should be “Does Jain suggest or disclose either of these relationships?”). But unfortunately, the examiner concludes that “since H is not claimed, thus L is not known.”

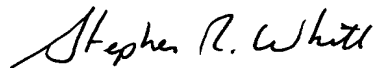
First, thickness H is recited in the claims. But no, applicant hasn't picked a specific numerical value or range of values for H and recited it in his claims. He isn't required to do this. Teaching examples are given in the specification. That's what the law and Office practice require.

Here again, the commentary sounds like the examiner objects to either the articulation of claim terms or their respective definitions. If this is the case, anticipation is not the appropriate rejection.

Unless the examiner can point out where in Jain the recited relationships between wiring thickness H, width W, and distance L may be found, independent claims 1 and 11 can not be deemed anticipated.

No other issues remaining, reconsideration claims 1, 3-7, 10-13, and 15-18 is requested. A favorable action on pending claims 1 and 3-18 is also requested.

Respectfully submitted,



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